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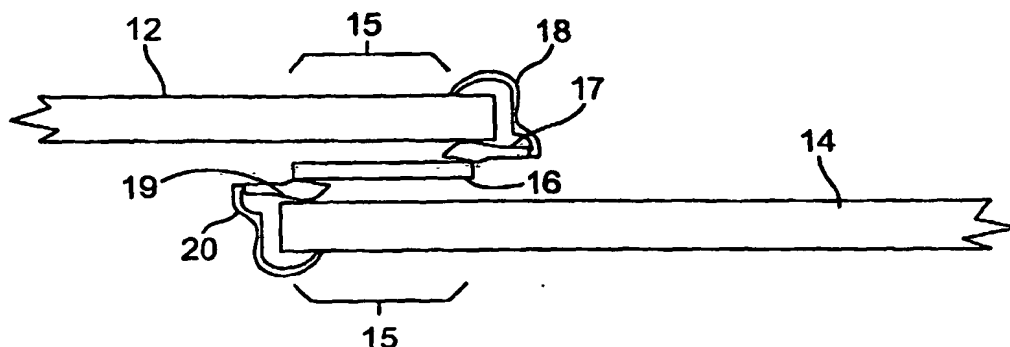
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(54) Title: METHOD FOR BONDING THERMOPLASTIC OR THERMOSET POLYMERIC MATERIALS UTILIZING VOLT-
AGE APPLIED TO CONDUCTIVE MATERIAL(57) Abstract: A method for bonding or joining thermoplastic or thermoset polymeric materials is provided which comprises ap-
plying a layer of conductive material (16) at a joint or between surfaces of thermoplastic or thermoset polymeric materials (12, 14),
introducing a current so as to raise the temperature of the polymeric material above its melting point, maintaining the current for a
time sufficient to allow the polymeric material to become molten and thereby form the joint or bond, and then removing the current
and allowing the joint or bond (15) to cool. The method is advantageous in that it provides a simple and inexpensive means of
bonding thermoplastic or thermoset polymeric materials with a minimum of materials and equipment. The method of the present
invention can also be utilized so as to heat thermoplastic pipes and other devices made of thermoplastic materials.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/00536

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B32B 31/12, 26

US CL : 156/196,272.2,273.9,274.4,277,308.2,308.6; 219/78.01,86.1,91.2,91.23,148; 403/270; 264/404,405,479

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 156/196,272.2,273.9,274.4,277,308.2,308.6; 219/78.01,86.1,91.2,91.23,148; 403/270; 264/404,405,479

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 6,211,492 B1 (TANAKA et al) 03 April 2001 (03.04.2001), column 3, lines 19-31.	1, 16 2-13, 17-18
X — Y	US 5,743,989 A (KUMAGAI et al) 28 April 1998 (28.04.1998), column 3, lines 35-64; column 4, lines 23-31.	1, 16 2-15, 17-18
X — Y	US 5,779,843 A (KUMAGAI et al) 14 July 1998 (14.07.1998), column 6, lines 5-33.	1, 16, 17 2-14, 18

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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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